

**RAPID FLUORESCENT LABELING OF TISSUE FOR MICRODISSECTION  
USING  
FLUORESCENT SPECIFIC BINDING AGENTS**

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**ABSTRACT OF THE DISCLOSURE**

Methods are disclosed for rapid and specific fluorescent staining of biological tissue samples that substantially preserve biological molecules such as mRNA. Methods for microdissecting tissue to obtain pure populations of cells or tissue structures based upon identifying and excising cells or tissue structures that are labeled with fluorescent specific binding agents are also included. A laser capture microdissection apparatus useful for identifying and isolating cells and tissue structures following rapid immunofluorescent staining is also disclosed.

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